

What is claimed is:

1. A water irrigation system, comprising:

a computer system;

5 a sensing unit comprising a solar panel configured to receive sunlight and to use the received sunlight to produce electricity, and wherein the sensing unit is configured to provide output that is a function of the received sunlight to the computer system;

wherein the computer system is configured to assess solar insolation as a function of the output from the sensing unit; and

10 wherein the computer system is configured to control irrigation of a zone to be irrigated at least partially based on the assessed solar insolation.

2. The water irrigation system of claim 1, wherein the solar panel is configured to supply at least a portion of the electricity to the sensing unit.

15 3. The water irrigation system of claim 1, wherein the sensing unit is located near or in the zone to be irrigated, and wherein the sensing unit is elevated from the computer system by at least 2 meters.

20 4. The water irrigation system of claim 1, wherein the output is provided to the computer system via radiofrequency radiation.

5. The water irrigation system of claim 1, wherein the sensing unit is located such that the amount of sunlight received per unit area by the solar panel is within one
25 standard deviation of the average amount of sunlight received per unit area by the zone to be irrigated.

6. The water irrigation system of claim 1, wherein the computer system comprises an infrared receiver.

7. The water irrigation system of claim 1, wherein the computer system comprises an infrared transceiver.

8. The water irrigation system of claim 1, wherein the computer system is
5 configured to assess zonal evapotranspiration at least partially based on the assessed solar insolation.

9. The water irrigation system of claim 1, wherein the computer system is
configured to assess zonal evapotranspiration at least partially based on the assessed solar
10 insolation, and wherein the computer system is configured to assess an irrigation need of the zone to be irrigated at least partially based on the zonal evapotranspiration.

10. The water irrigation system of claim 1, wherein the computer system is
configured to assess zonal evapotranspiration at least partially based on the assessed solar
15 insolation, wherein the computer system is configured to assess an irrigation need of the zone to be irrigated at least partially based on the zonal evapotranspiration, and wherein the computer system is configured to control irrigation to at least meet the irrigation need of the zone to be irrigated.

11. The water irrigation system of claim 1, wherein the computer system is
20 configured to control irrigation at least partially based on community irrigation instructions.

12. The water irrigation system of claim 1, wherein the sensing unit is configured to
25 assess climatological conditions, wherein the sensing unit comprises a transmitter configured to provide output that is a function of climatological conditions to the computer system, and wherein the solar panel is configured to supply at least a portion of the electricity to the sensing unit.

13. The water irrigation system of claim 1, further comprising one or more valves that
30 are operated by the computer system.

14. The water irrigation system of claim 1, further comprising one or more valves that are operated by the computer system, wherein at least one of the valves is coupled to one or more conduits, and wherein at least a portion of each conduit is configured to carry
5 water.

15. The water irrigation system of claim 1, further comprising one or more valves that are operated by the computer system, wherein at least one of the valves is coupled to one or more conduits, and wherein at least a portion of each conduit is configured to carry
10 water, and comprising one or more irrigation devices, wherein at least one of the irrigation devices is coupled to at least one of the conduits.

16. The water irrigation system of claim 1, further comprising one or more valves that are operated by the computer system, wherein at least one of the valves is coupled to one
15 or more conduits, wherein at least a portion of each conduit is configured to carry water, and further comprising a source of water that is coupled to at least one of the conduits.

17. A method of controlling irrigation, comprising:
assessing solar insolation from output provided by a solar panel near or in a zone
20 to be irrigated; and
controlling irrigation at least partially based on the assessed solar insolation.

18. The method of claim 17, further comprising inhibiting irrigation during daylight hours at least partially based on the assessed solar insolation.
25

19. The method of claim 17, further comprising assessing zonal evapotranspiration at least partially based on the assessed solar insolation.

20. The method of claim 17, further comprising assessing zonal evapotranspiration at
30 least partially based on the assessed solar insolation, and assessing an irrigation need of the zone to be irrigated at least partially based on the assessed zonal evapotranspiration.

21. The method of claim 17, further comprising using the assessed solar insolation to assess zonal evapotranspiration, assessing an irrigation need of the zone to be irrigated at least partially based on the assessed zonal evapotranspiration, and controlling irrigation to
5 at least meet the irrigation need of the zone to be irrigated.

22. The method of claim 17, further comprising controlling irrigation at least partially based on community irrigation instructions.

10